VDI – Virtual Desktop Indigestion

Lessons learned from Village of Schaumburg's VDI implementation

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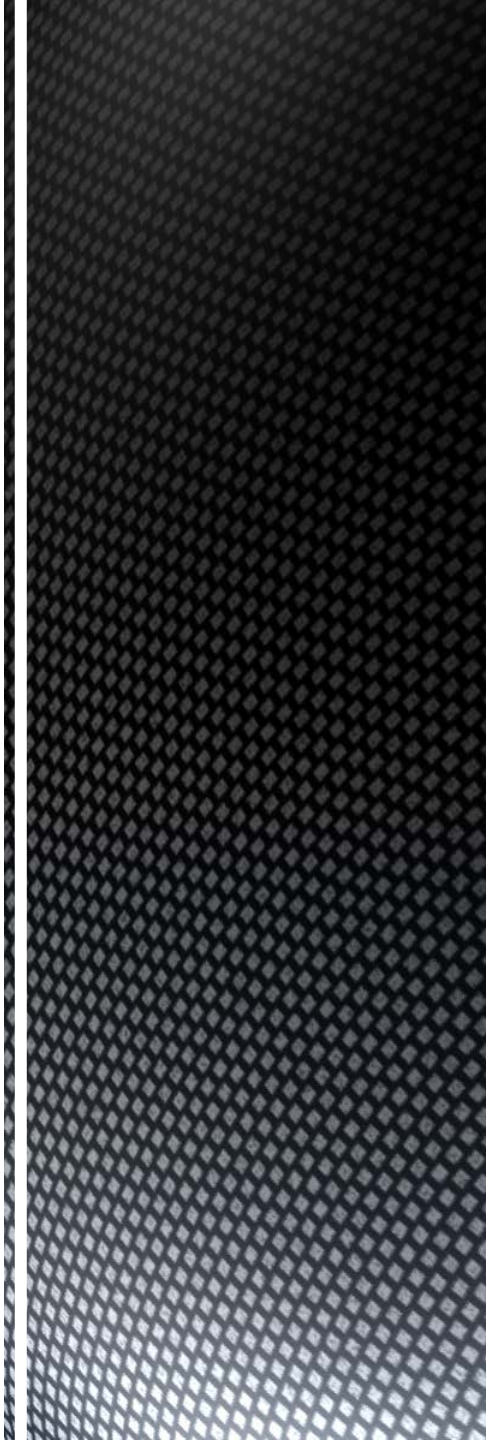
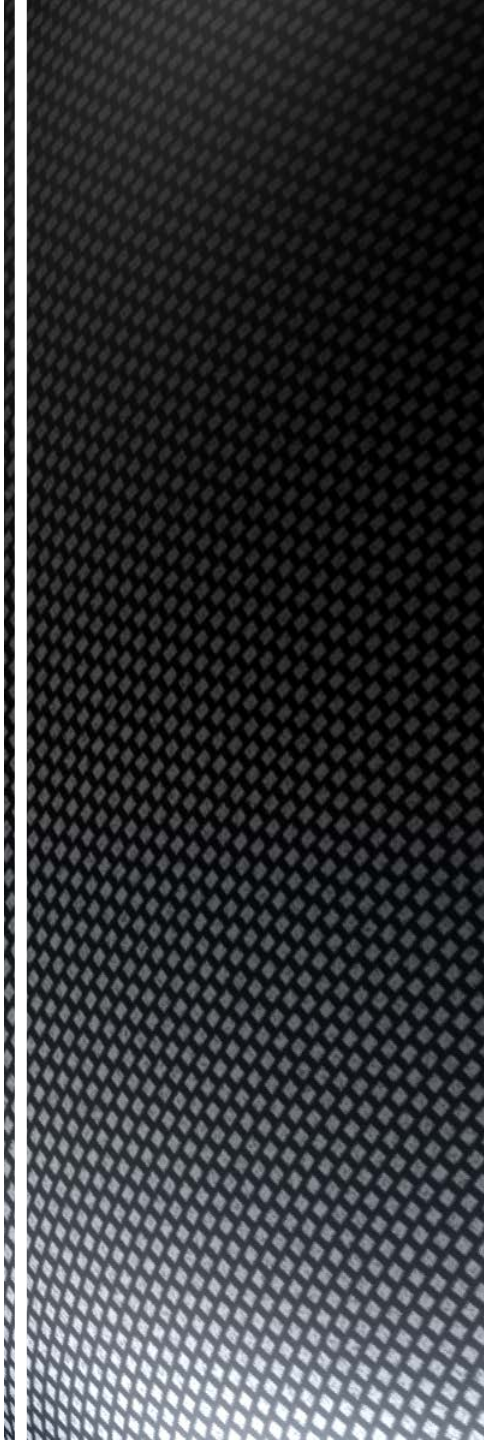


VDI – Virtual Desktop Indigestion

- Goals of VDI Implementation
- Infrastructure
- Virtual Desktops
- Applications
- User Experience
- Recommendations



Goals of VDI Implementation

Goals

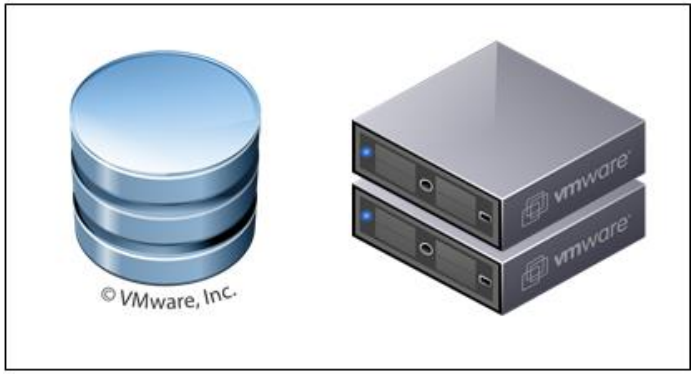
- Reduce PC implementation time
  - About 90+ minutes each
- Reduce PC maintenance
  - Updates, troubleshooting, user downloads, . . .
- Reduce cost of PC replacements
  - About $700 each
- Replace ‘common space’ and other high maintenance computers

VDI

- Reduce PC implementation time
  - About 15 minutes each
- Reduce PC maintenance
  - User reboots VDI
- Reduce cost of PC replacements
  - About $350 each
- Replace ‘common space’ and other high maintenance computers
  - Training room, EPW computer lab, Intern/volunteer users

Infrastructure

Data Center 1



Data Center 2

Servers

- Cisco UCS
  - SD Boot

Storage

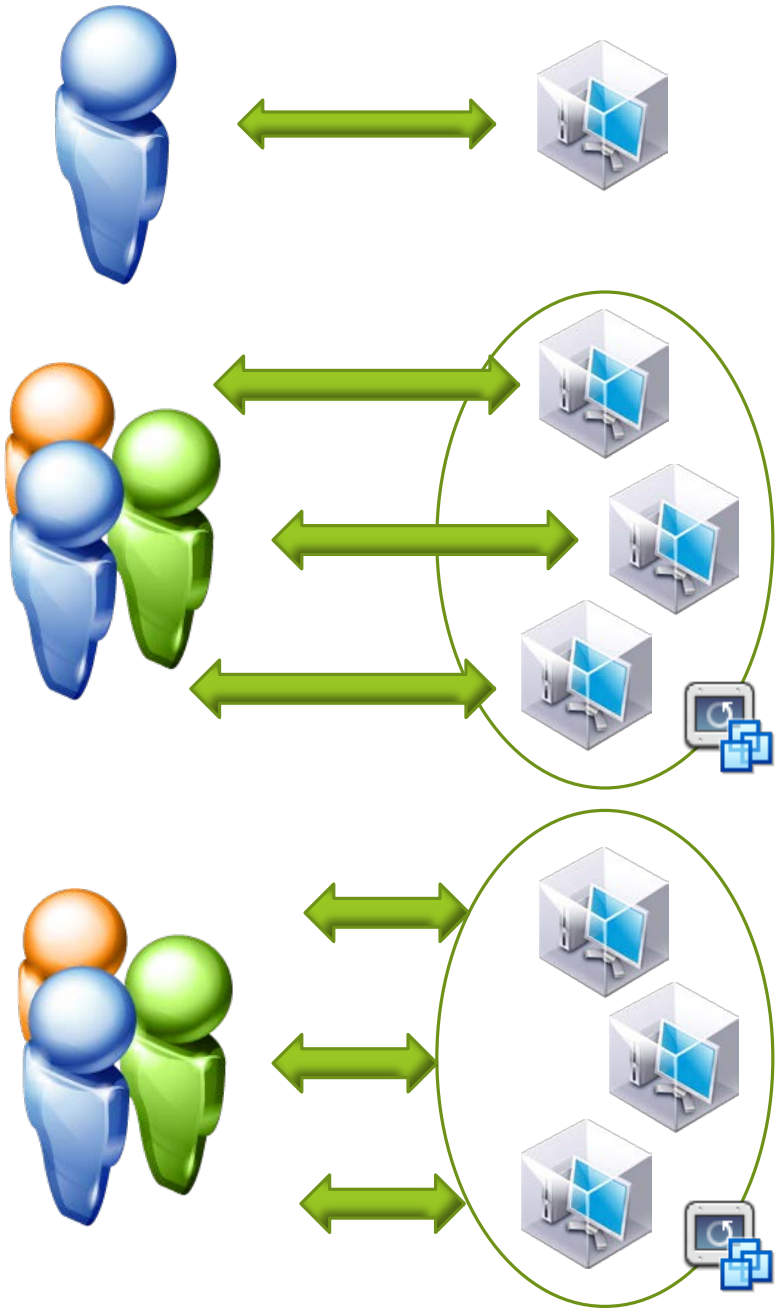
- EMC
  - SSD, SAS, NL SAS

Devices

- Viewsonic Zero Client
  - SC-Z55
- iPhone
- iPad
- PC with Windows 7 Thin PC

PCoIP Protocol

- Teradici.com
- Teradici PCoIP Management Console



Virtual Desktops

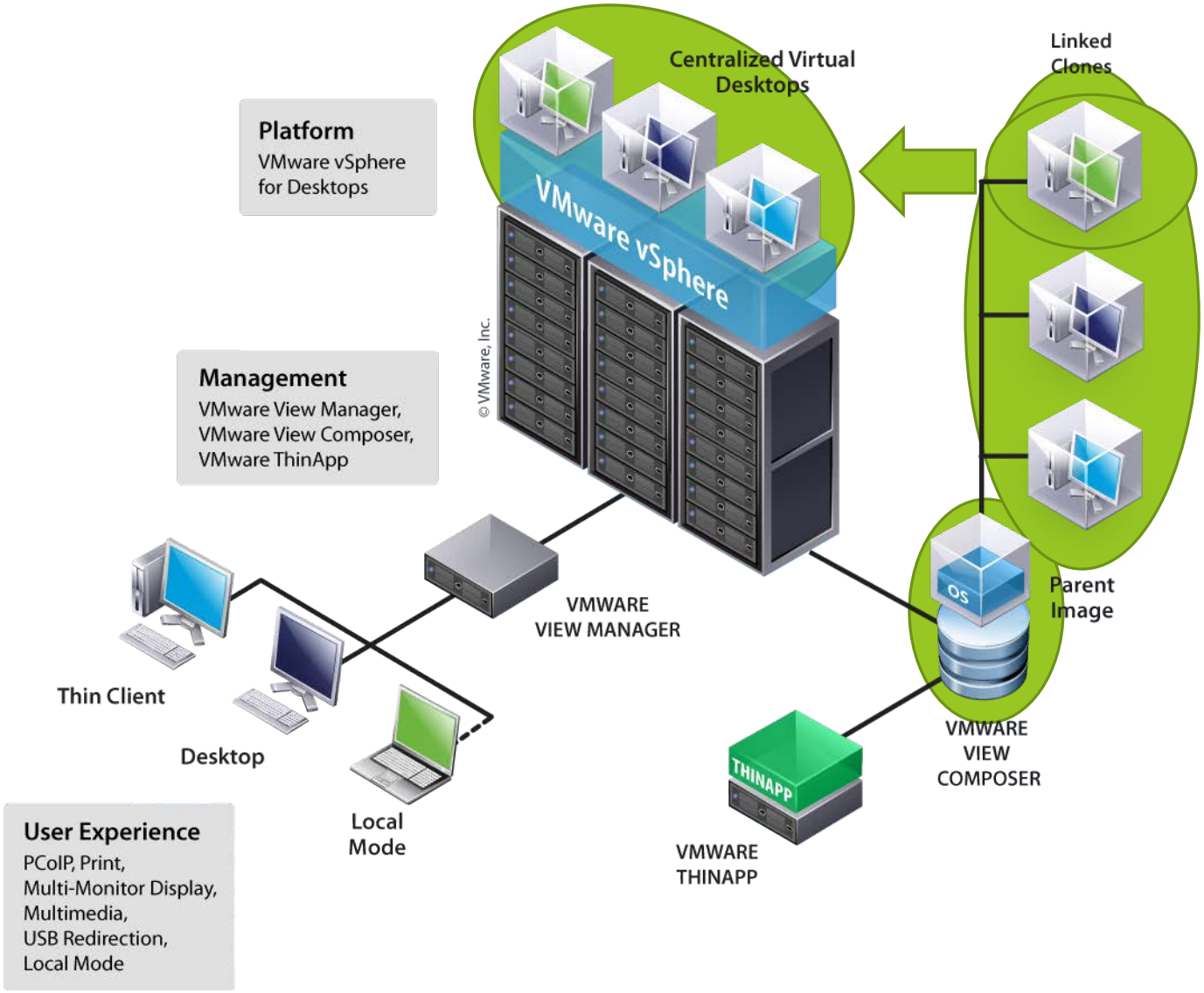
Pools

- Automated
- Manual
- Terminal Services

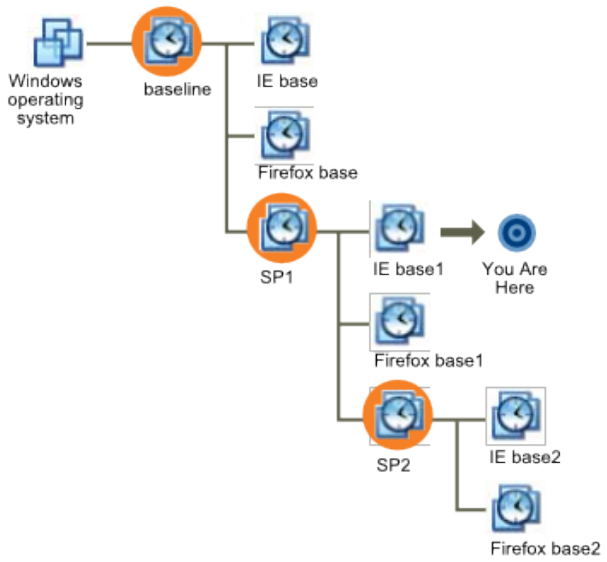
Automated Pools

- Dedicated
  - One to One assignment
- Floating
  - Full Virtual Machine
  - View Composer
    - Linked Clones
    - Persistent Disk

Virtual Machine Linked Clone Components

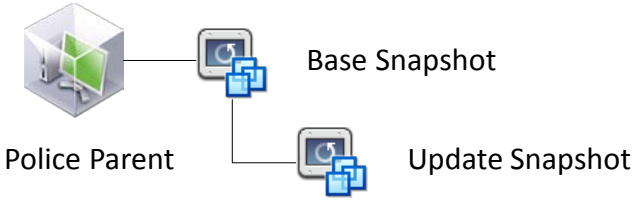


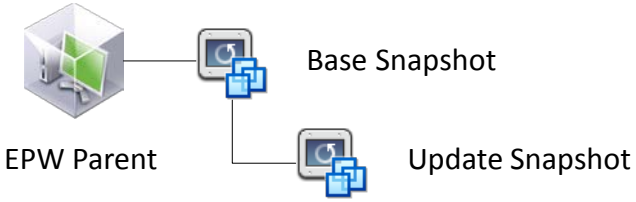
Parent Snapshot Management



Single Parent

- Less resource requirements
- Multiple snapshots for various installations
- Can only work on one Parent snapshot at a time





Multiple Parents

- More resource requirements
- Minimal snapshot management
- Multiple parent desktops can be worked on at the same time

Virtual Machine Comparison

Dedicated benefits

- User customizations
- Allows for specialty applications
- Unique user requirements

Dedicated problems

- Larger number of virtual desktops
- More resource required
- Regular maintenance still required
- Reset removes customizations

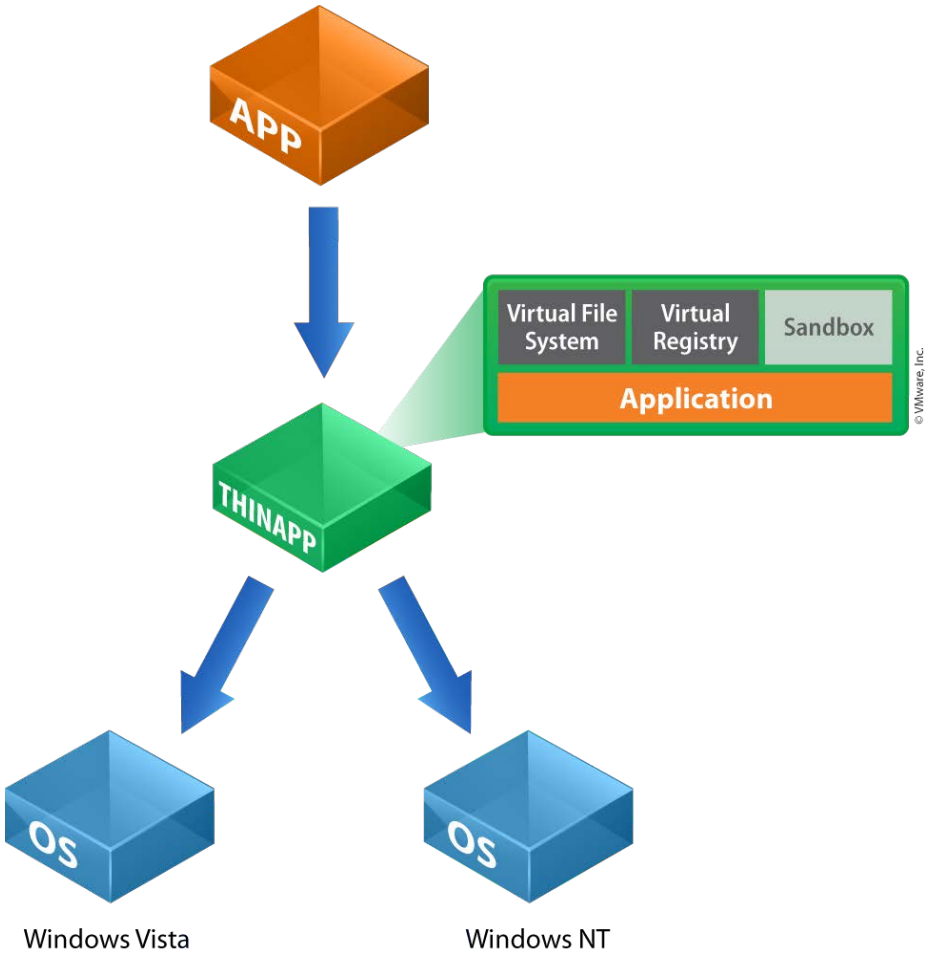
Linked Clones benefits

- Less resource requirements
- Standardized environment
- Complete refresh after logging off

Linked Clones problems

- Minimal user customization
- Difficult for special applications, but not impossible
- Complete refresh after logging off

Applications



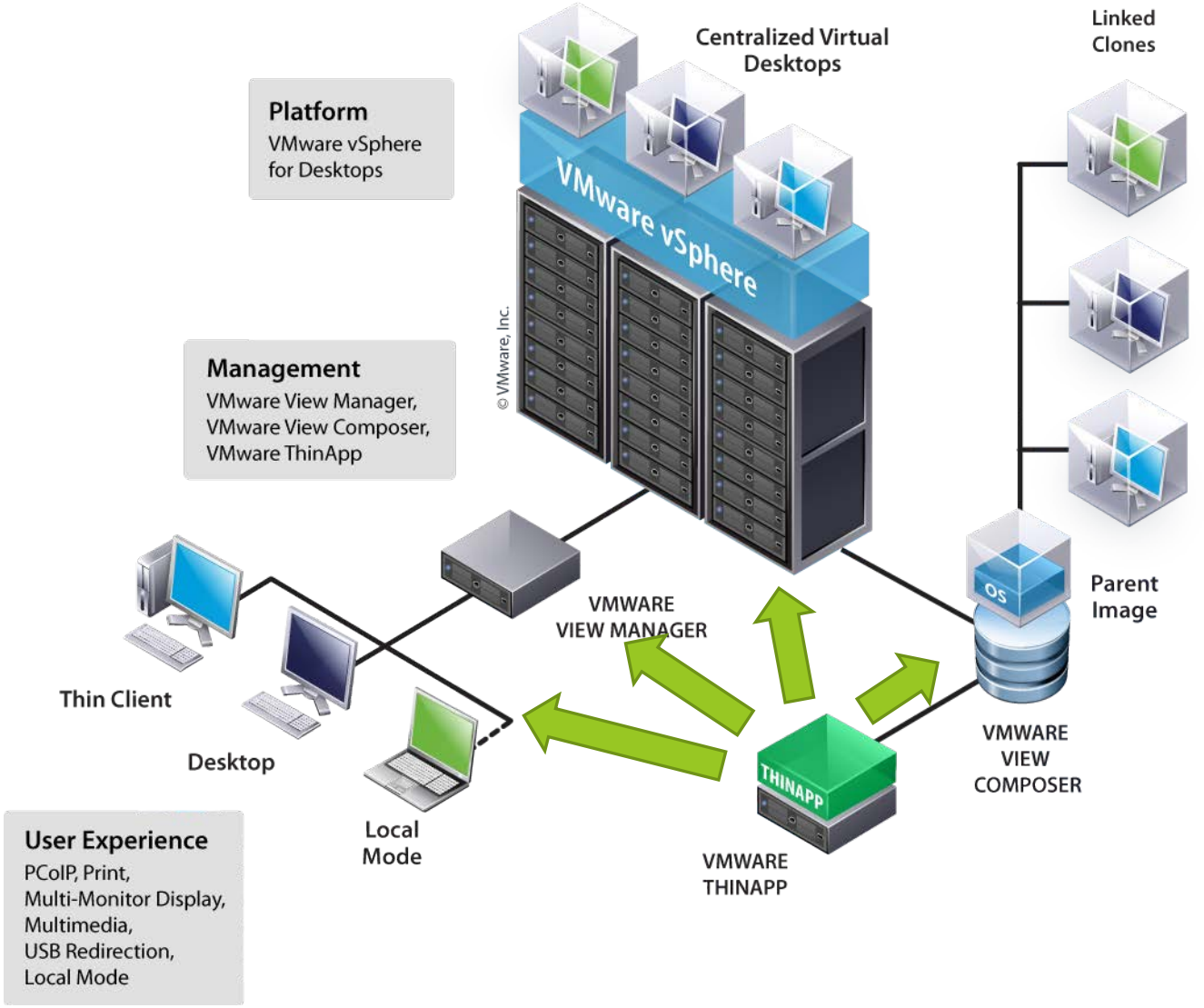
Base (Parent) Install

- General use (Office, printers, PDF reader, etc.)
- Common for Pool (GIS software, transcription software, etc.)
- Plug-ins (Silverlight, Java, etc.)

Thin App

- Special use
- Across Pools
- Can use outside of VDI

Virtual Machine Linked Clone Components



Thin App Applications

Applications which worked

- Fax software
- Chrome
- Firefox
- Single non integrated apps

Applications which had problems

- Acrobat Pro
  - No integration
  - No printing to PDF
  - Automatic updates
- Internet Explorer
  - Different versions
  - Plug-ins
- Java
  - Different versions
  - Frequent prompts to update
- CAD client
  - Requires frequent updates

Application work around

- Install with the application you want to thin app
  - Java
  - Plug-ins
  - Integrated apps

User Experiences

Training

- Training Room
- Other devices

Engineering & Public Works

- Computer Room
- iPads

Monitors

- LCD TVs
- Zero client

Testers

- Applications
- Configurations
  - Screen savers
  - Settings
  - GPO
  - Time outs
- Customizations
  - Persona
  - Non-persona
  - Resolutions

Recommendations

Hardware

- Zero clients – they are all basically the same. The PCoIP protocol controls the device.
- Repurposed PC
- Monitors – wall mounts with clients

Configurations

- Modify script before implementing
  - Remove screen saver and desktop settings, use GPO instead
- Use GPO to control systems
- Install all printers for department in Parent then add in GPO

Applications

- List applications, add-ins, and plugins
  - Determine if they should be in your base image or a thin app.
- Realize acceptable app limitations
- Create base thin app OS desktop
  - Use snapshot tree for different variations
- Test

Users

- Start with a training room or common computer area
- Ask for technical volunteers to test configurations

Questions and Thank You

If you have any questions about the presentation or the Village of Schaumburg implementation, please feel free to contact me.

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